

REMARKS/ARGUMENTS:

This Petition is being filed in response to an Office Action with a mailing date of May 21, 2003.

Amendments to the Detailed Description:

Examiner objected to the Specification of inconsistencies in reference designations. These have been amended as described below.

Paragraph [0025], first line, was amended to include a reference to FIG. 8, as requested by Examiner.

Paragraph [0028] was amended to correct incorrect reference designations in line 4, line 7, and the last line of the paragraph, all as suggested by Examiner.

Paragraph [0030] was amended as follows: In the 5th line, the term "between the wall of the container and the refractory mold" was amended to read --between a container wall 18A of the container and the refractory mold 16--. In line 15, the term "mold 18" was amended to --mold 16--. Also, for reasons of consistency in nomenclature, the word "refractory" was added to the term "mold 16" where it had been previously left out.

Amendments to the Claims:

Claim 1 was amended to include the subject matter of claims 9 and 13. Specifically, step f) was amended to recite a second container that has "at least one opening for pouring in a molten substance and at least one container wall, wherein said second container is greater in size than said refractory mold so as to leave a gap between said refractory mold and said at least one container wall..." Also, step h) now recites the step of pouring a jacket material over said refractory mold so as to fill said gap with said jacket material to form a plate..." Step i) recites a the step of "cooling said reticular structure by maintaining a temperature of said second container, and particularly of said at least one wall, that is lower than a temperature of said molten substance so as to draw heat from said reticular structure into said second container, and particularly through said plate; ..." This step is discussed in paragraph [0030] of the Description as filed and, thus, introduces no new subject matter. The plate (24) is discussed in paragraph [0029] of the Description and shown in FIG. 8 of the application as originally filed.

Claims 9 and 13 were cancelled.

Claim 8 was amended merely to correct a definite article for purposes of consistency of form. These amendments introduce no new subject matter into the application and Applicant respectfully requests approval and entry of these amendments.

35 U.S.C. § 103(a) Rejection:

Examiner rejected claims 1 and 8-18 under 35 U.S.C. § 103(a) as being unpatentable over Walz (U.S. Patent 3,946,039) in view of Japanese Patent JP 63-84758. Examiner asserts that Walz discloses the method as disclosed in the present application, without the step of transferring the refractory mold from a first container to a second container, but that the Japanese Patent discloses a method in which the expendable foam model (2,4) is placed into a second container before pouring molten metal to form the final product.

Claim 1 of the present application claims a second container that is greater in size than the refractory mold, thereby providing a gap between the refractory mold and a wall of the container. A jacket material (not the molten metal to form the final product) is poured into the second container to fill the gap. The purpose of filling the gap with this jacket material is to facilitate cooling of the final product. Applicants respectfully submit that none of the references cited discloses using a second container that is larger than the mold to provide a gap that is subsequently filled with a jacket material. As Examiner points out, Walz does not disclose using a second container in the production of the final product. The Japanese Patent does disclose the use of a second container (mold 8), but it does not disclose a second container that provides a gap and does not disclose a method of filling the gap with jacket material to form a plate (of jacket material). FIGS. 1 – 3 of the Japanese Patent show a removable first material being mixed with a second material to form a first mold. This first mold is then placed in a second mold and a third material (molten metal) is then introduced into the first mold, displacing the removable first material, to obtain a final product comprising the second and third materials. The second mold appears in all figures to be precisely formed to receive the shape of the first mold. In other words, the cited Japanese Patent does not disclose providing a container that is not a mold for the purpose of receiving the second mold and providing a gap between the second mold and a container wall that is subsequently filled with a jacket material.

Applicants respectfully submit that the cited prior art, either alone or in combination, does not disclose the method of the present invention as claimed in currently amended claim 1. Accordingly, Applicants submit that amended claim 1 contains allowable subject matter and request that Examiner withdraw his rejection under 35 U.S.C. § 103(a) of claim 1. All other pending claims are dependent from claim 1 and, thus, include all the elements and limitations of the base and intervening claims. Applicants submit that the dependent claims also contain allowable subject matter and therefore

request that Examiner allow claims 8, 10 – 12 and 14 – 18.

Amendments to the Drawings:

Examiner objected to FIG. 1, for including reference designation "10A" that was not mentioned in the Description. This designation was in error and has been removed from the amended formal drawing sheet. Reference designation "18A" has been added to FIG. 7. This designation refers to a wall of the container. The wall 18A and the gap between the wall 18A and the refractory mold 16 are discussed in paragraph [0030] as originally filed; thus, this amendment introduces no new subject matter. The leader line to reference designation "24" was shortened for purposes of clarity.

Priority Document:

Priority document DE 199 39 155.6 is enclosed herewith.

Applicant respectfully submits that each and every objection and rejection raised by Examiner in the Office Action has been addressed, that all the currently submitted claims contain allowable subject matter, and accordingly requests that a timely Notice of Allowance be issued in this application.

Respectfully submitted,

Date: August 19, 2003

Attached: Two Sheets Annotated Drawings
Two Sheets Amended Formal Drawings



Patricia M. Mathers
Attorney for Applicants
Reg. No. 44,906
Bohan, Mathers & Associates, LLC
P. O. Box 17707
Portland, ME 04112-8707
(207) 773-3132

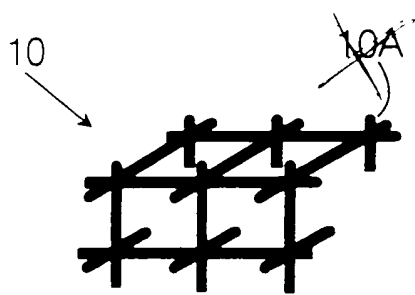


FIG. 1

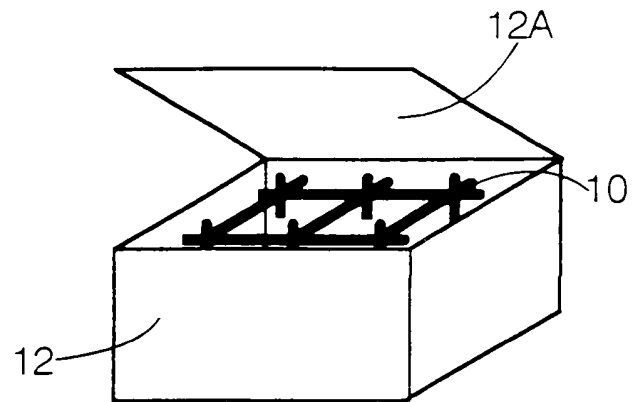


FIG. 2

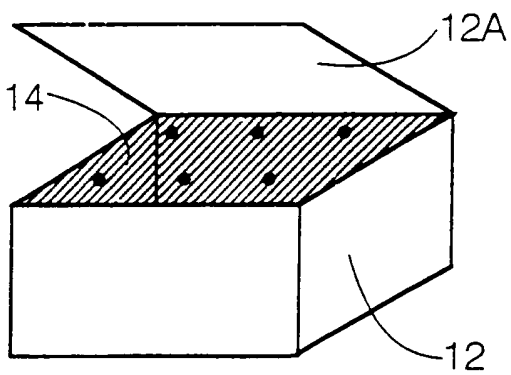


FIG. 3

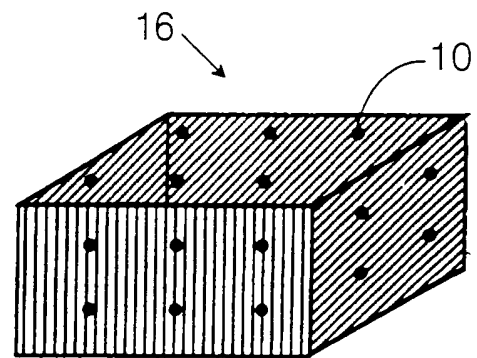


FIG. 4

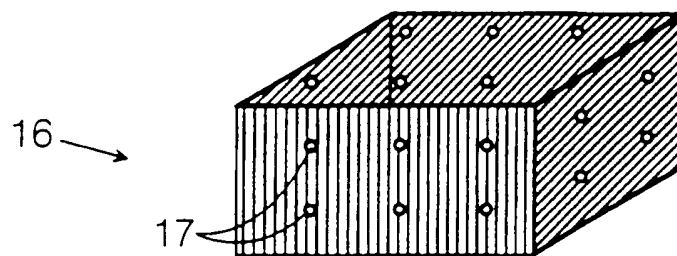


FIG. 5

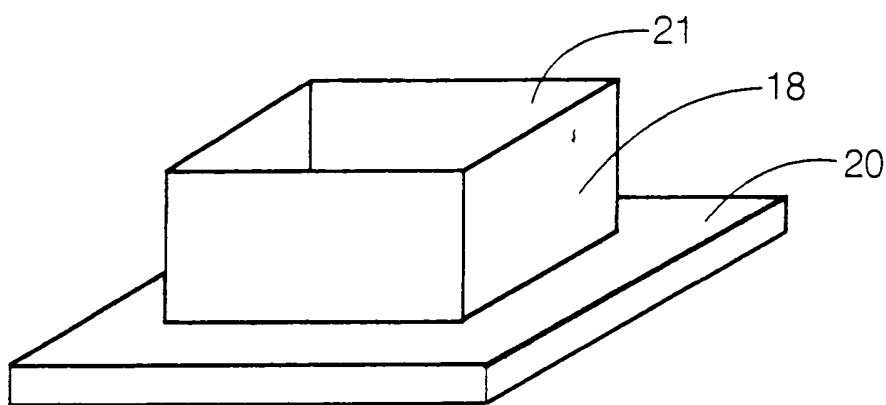


FIG. 6

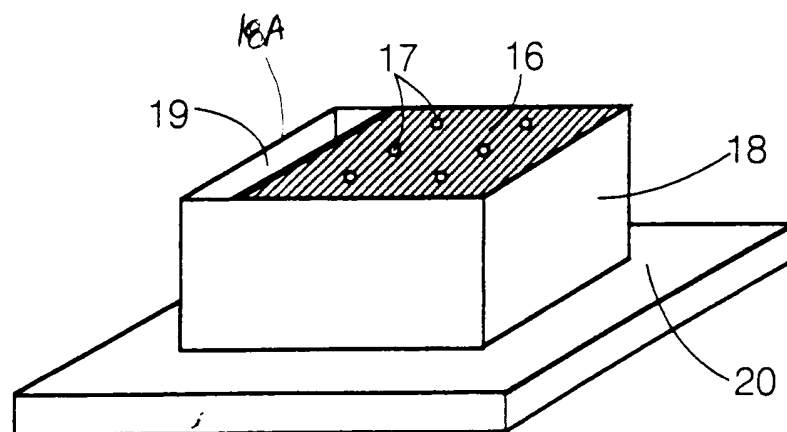


FIG. 7

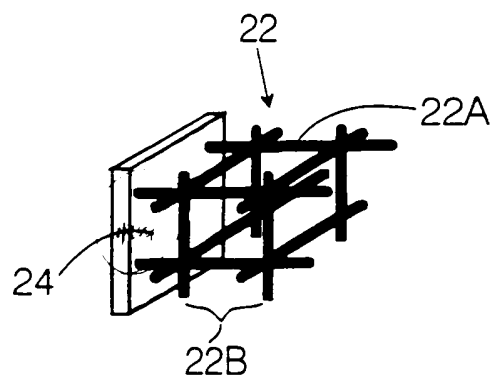


FIG. 8